

# Notice of Allowability

Application No.

10/696,343

Examiner

Irakli Kiknadze

Applicant(s)

DUNHAM ET AL.

Art Unit

2882

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 07/18/2005.
2. ☒ The allowed claim(s) is/are 1-7,9-15 and 18-23.
3. ☒ The drawings filed on 18 July 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 08012005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. In response to the Office action dated April 18, 2005 the Amendment has been received on July 18, 2005.

Claims 1, 6, 9, 12, 13, 18, 20 and 21 have been amended.

Claims 8, 16 and 17 have been canceled.

Claim 23 has been newly added.

Claims 1-7, 9-15 and 18-23 are currently pending in this application.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Alan L. Cassel (Reg. No. 35,842) on August 1, 2005.

4. The application has been amended as follows:

Claim 12, in line 9, " said system further configured to " should read -- a computer configured to --;

Claim 23, in lines 3 and 4, " an object to be imaged, said apparatus configured to: " should read -- an object to be imaged, comprising: a computer configured to: --.

***Allowable Subject Matter***

5. Claims 1-7, 9-15 and 18-23 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Claims 1-5 are allowed because prior art fails to teach or make obvious a method for adjusting a focal spot position during a scan of a computed tomography imaging system having a z-axis, the method comprising: using a transfer function to determine an electronic deflection value to an x-ray tube as at least one of a deflection voltage or deflection current to track the focal spot in the z-axis direction as claimed in claim 1.

Claims 2-5 are allowed by virtue of their dependence.

Claims 6, 7 and 9-11 are allowed because prior art fails to teach or make obvious a method for adjusting a focal spot position during a scan of a computed tomography imaging system having a z-axis, the method comprising: obtaining a transfer function for a focal spot position in accordance with an x-ray tube temperature, utilizing the x-ray tube temperature and calibration data to determine voltages to be applied to a cathode of an x-ray tube; and applying the determined voltage to the cathode of the x-ray tube as claimed in claim 6. Claims 7 and 9-11 are allowed by virtue of their dependence.

Claims 12-15, 18 and 19 are allowed because prior art fails to teach or make obvious a computed imaging system comprising: a computer configured to determine a shift in a focal spot position in accordance with z-ratio read from a detector and to utilize a transfer function to determine a cathode bias voltage for an x-ray tube to compensate

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for the focal spot position shift as claimed in claim 12. Claims <sup>13-15</sup>~~3-15~~, 18 and 19 are allowed by virtue of their dependence.

Claims 20-23 are allowed because prior art fails to teach or make obvious a computed tomography imaging system having a z-axis comprising a computer configured to: determine a shift in a position of a focal spot of an X-ray tube use a transfer function to determine an electronic deflection value, and apply the electronic deflection value to the x-ray tube as at least one of a deflection voltage or a deflection current to track the focal spot in the z-axis as claimed in claim 23.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Popescu (US Patent 6,652,143 B2) teaches a method and apparatus for measuring the position, shape, size and intensity distribution of the effective focal spot of an x-ray tube.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00-5:30.

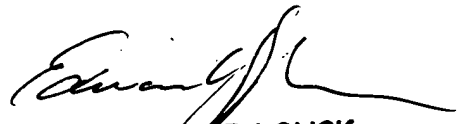
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irakli Kiknadze  
August 1, 2005

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EDWARD J. GLICK  
SUPERVISORY PATENT EXAMINER